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ABSTRACT

A study of campus crime trends from 1974 to 1990 examines the relationships between campus crime and college characteristics. The research drew on merged national databases containing federal crime statistics, community demographic data, and campus characteristics. The results show that campus rates of both violent crime and property crime are falling, especially since 1985. Moreover, students are considerably safer on-campus than in the cities and communities surrounding them. Vehicle theft rate has remained level. The lowest average crime rates are found at 2-year colleges, while the highest overall rates are at medical schools and health science centers. While student characteristics in general are more highly related to campus crime than are community and organizational measures, differences were found in the patterns of variables associated with violent crime versus property crime. The variable most strongly associated with the campus crime rate was the number of campus police per capita. Factors associated with violent crime were more complex and difficult to predict. The evidence for spillover from community to campus was statistically significant but not consistent. There was evidence for spillover effect for property crime, but not for violent crime. The paper contains six tables, four charts, and four references. (Author/JB)

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The Relationship of Campus Crime to Campus and Community Characteristics

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This paper was presented at the Thirty-Third Annual Forum of the Association for Institutional Research held at the Chicago Marriott Downtown, Chicago, Illinois, May 16-19, 1993. This paper was reviewed by the AIR Forum Publications Committee and was judged to be of high quality and of interest to others concerned with the research of higher education. It has therefore been selected to be included in the ERIC Collection of Forum Papers.

Jean Endo
Chair and Editor
Forum Publications
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The Relationship of Campus Crime to Campus and Community Characteristics

ABSTRACT

This research draws upon merged national databases containing federal crime statistics, community demographic data, and campus characteristics. The study displays the trends in campus crime since 1974, and using 1990 data, examines the relationships between campus crime and college characteristics. The results show that campus rates of both violent crime and property crime are falling, especially since 1985. Moreover, students are considerably safer on-campus than in the cities and communities surrounding them. The lowest average crime rates are found at two-year colleges, while the highest overall rates are at medical schools and health science centers. While student characteristics in general are more highly related to campus crime than are community and organizational measures, we find differences in the patterns of variables associated with violent crime versus property crime. The variable most strongly associated with the campus crime rate is the number of campus police per capita. Factors associated with violent crime are more complex and difficult to predict.

Introduction

Campus crime, while receiving heightened media attention the past two to three years, is not yet well understood in the academic community. Very few investigative studies have been conducted on the correlates of campus crime. If the issue continues to receive heightened media coverage, the higher education community must be able to show that it understands the problem and is addressing it. Numerous civil court cases have also pointed out the need for campus administrators and executives to be cognizant of their duties and responsibilities with respect to protecting students from criminal activity (Richmond, 1990). This study examines the correlates of campus crime. Its focus is on the characteristics of campuses, of students, and of the communities that surround them that are associated with crime on campus.

Providing insights to campus crime should help students, faculty, and administrators alike to develop more effective responses and strategies to address crime on campus. Such information also should increase understanding among trustees, legislators, parents, and others concerned about the problem.

Residential campuses are unique institutions in American society because many have a relatively homogeneous population with respect to age, are comprised of a highly mobile population, and have a well defined sense of university community. Furthermore, colleges and universities pose an "environment that can be subjected to alteration and control" (Fox and Hellman, 1985). Additionally, universities have direct responsibility for, if not control over dormitories and other campus buildings. Even with the demise of *in loco parentis*, colleges and universities are generally responsible for student safety, especially on campus, and are widely believed to exert considerable influence on the personal activities of their students(Richmond, 1990).

The Student Right-to-Know and Campus Security Act of 1990, largely a result of a grass roots movement to make campus crime data available to current and prospective students, has further directed public attention toward campus criminal activities and safety. For the first time, in 1993, every college and university receiving federal funds is required to issue, upon request, an annual security report to employees, to students and their parents, as well as to the secretary of education. The report is to include a statement of security policies, and crime statistics for the preceding three years covering the crimes occurring on campus in the following categories: murder, rape, aggravated assault, burglary, motor vehicle theft, and alcohol and drug violations.

The Chronicle of Higher Education recently published college and university crime rates for nearly 2,400 institutions of higher education (Chronicle, Jan. 20, 1993). The Chronicle reported that there were 7,500 incidents of crime on U.S. campuses in 1992, including 30 murders, 1,000 rapes, 1,800 robberies. In addition, there were 32,127 burglaries and 8,981 motor vehicle thefts.

While many concerned individuals and organizations welcome the new law requiring the disclosure of campus crime data, many college officials see the disclosure as a potentially damaging act. They express a concern that people will use the crime data to "sensationalize or stereotype institutions" (Chronicle, July. 22, 1992). Indeed, the legislation does not provide a context for interpreting the data. It does not seek to distinguish between residential and commuting institutions. Institutions with very small enrollments may appear to have very low instances of crime vis-a-vis large institutions, but when enrollments are taken into account they may in fact

have higher per capita crime rates. Colleges are weary that crime numbers will be used out of context. Most administrators believe that there is significantly less crime on campuses than in communities (Chronicle, Jan. 20, 1993), which, as we will discuss later, our study bears out.

The debate about publishing campus crime continues though. Many people familiar with the issue believe that colleges are merely concerned with their images, not about safety. To them the debate over crime reporting is about its impact on money generated by enrollments and alumni contributions (Chronicle, July. 22, 1992). Regardless of one's feelings about campus crime reporting it is the law, and campus crime is an issue of concern to all who attend and suport colleges and universities. Moreover, there is a dearth of descriptive and analytical studies.

Theoretical Framework

Why are colleges and universities susceptible to crime? The conceptual framework for our study derives both from the field of criminal justice and from earlier research. Crime in society generally falls within the framework of **Routine Activities Theory.** According to Cohen and Felson, most criminal acts require convergence in space and time of likely offenders, suitable targets, and the absence of capable guardians. This theory is based on the "supposition that daily work activities separate many people from those they trust and from property they value" (Cohen and Felson, 1979). Routine activities bring together people of different backgrounds. Likely offenders are found within the surrounding community, if not within the student body itself. If a capable guardian is absent, then the probability of crime occurring becomes higher. Colleges and universities by their nature, contain suitable targets for offenders - people coming and going at all hours, unattended or poorly secured buildings, accessible motor vehicles, and items of high value per unit size, such as stereo equipment and desk-top computers. Given the dispersed nature of many campuses, guardians such as campus police or students are rarely standing watch over valuables. While offenders may be exogenous to the campus or students themselves, suitable targets and the absence of guardians lead to Cohen and Felson's convergence that explains the occurrence of campus crime.

Campus crime occurs, but what influences or contributes to its occurrence? Fox and Hellman (1985) conducted a study of factors that influence the total campus crime rate, as reported by the FBI's Uniform Crime Reports. They examined such things as student characteristics, structural features of the campus, administrative staffing, and location. This study was published several years prior to the recent explosion of media attention on campus crime and used data from 1980. The authors' found colleges and universities have less crime than their surrounding communities and location had little or no influence on the ratio of campus to community crime. Among the correlations between campus crime and university characteristics found by Fox and Hellman were:

- Positive, significant correlations between campus crime and tuition cost, the percent of male students, population density, and campus police staffing levels.
- The percent of minority students on campus was not a significant correlate of campus crime.

Within the framework of Routine Activities Theory, and using a larger more elaborate database, we sought to revisit the earlier 1980 research, especially in view of recent media attention and expressed concern by students and parents.

Methodology

Using both logitudinal and cross-sectional databases, and both descriptive and multivariate analyses, this study examines the trends and correlates of campus crime. The two primary aspects of the study examine the trends in campus crime since 1974, and analyze 1990 cross sectional data for relationships between campus crime and college characteristics. Fox and Hellman's study utilized 1980 crime statistics and campus data for 222 colleges and universities. This current study utilizes a similar but expanded dataset of 400 institutions of higher education using several sources of data.

The Consortium for Higher Education Campus Crime Research (CHECCR) has amassed data on a sample of 400 college campuses across the country. These data are being compiled by CHECCR to better inform institutions of higher education about the causes and correlates of crime on campus. Two kinds of CHECCR analyses can be presented to participating institutions. The first is a general report about the causes and correlates of campus crime in general. These analyses can be broken down by type of crime and characteristics of the institution. The second type is an individual, confidential, proprietary report considering how a particular campus ranks relative to others of similar size and type.

Our research draws upon three merged national databases of federal crime statistics, community demographic data, and campus characteristics data, the latter from the College Board Survey.

Database Building

Two data sets have been constructed using the Federal Bureau of Investigation's (FBI) Uniform Crime Report (UCR) data on campus crime. The first is a time series data set that plots trends in specific types of crime from 1974 to 1991 for colleges that have reported consistently. Because the number of colleges reporting instances of crime to the FBI has increased each year, another version of this time series uses data on all colleges reporting each year. This data set allows us to view trends in specific types of crime over time.

The second FBI data set is a cross section of the 400 colleges reporting to the UCR in 1990. Variables in the data set include crime rates for specific types of crime, along with characteristics of the campus and the community in which the campus is housed.

These data sets allow us to examine many questions about the character and correlates of specific types of campus crime. For example, what are the trends in campus crime since 1974? How do community characteristics affect crime rates on campus?

While many campus and student body characteristics are included in the 1990 UCR data set, these data items were improved and expanded upon by merging it with data from the 1989-90 College Board Survey. In addition, we utilized information from the Carnegie Commission, Barron's Guide, U.S. News and World Report, the College Board, and the Chronicle of Higher Education. By compiling the additional data items we were able to expand the focus of the inquiry to examine a full range of college and student characteristics in addition to the community characteristics contained in the FBI data.

Variable Reduction

Merging the 1990 CHECCR crime data and the 1989 college and student characteristics database supplied over 475 separate variables as potential correlates of campus crime. Many variables provided redundant information, and several had an inordinate amount of missing data across many colleges in the sample. These variables were accordingly excluded from the examination. However, the broad scope and plethora of original data items provided more than enough information to proceed with the investigation.

Upon review, the remaining independent variables were worked into three broad categories: student, organizational, and community variables. The three groupings appear to fit well into Cohen and Felson's **Routine Activities Theory**. Students or their property comprise accessible targets, the organizational characteristics act as a surrogate for capable guardians, and community characteristics may provide likely offenders. It should be noted that there is not a clear delineation between each of the categories. For instance, some organizational characteristics such as the percent of students in residence halls could also be thought of as a student characteristic.

The framework of dividing the variables into three groups also served to aid in additional variable reduction. Variables that violated ordinary least squares error assumptions and caused considerable multi-colinearity were able to be replaced with variables that explained similar degrees of the data variance but did not violate such assumptions.

The refined dataset of predictors was whittled down to 68 variables - twenty-four surrogates of student characteristics, twenty-four surrogates of organizational characteristics, and twenty surrogates of community characteristics. Separate factor analyses (principle components analyses) were conducted for each grouping, aiding in the adoption of 20 variables for the final regression equations. The factor analyses grouped together those variables that explain similar aspects of the variance in campus crime. Variables were selected on the basis of having high factor loadings, a large number of cases, and lacking colinearity.

Table 1 lists the community variables utilized in the initial model and the number of cases containing the information. The variables in bold print were used in the final model equations. Where applicable, the factor loadings associated with each variable and its corresponding factor are shown.

Table 1

Community Characteristics

N	Variable	Crime	Population	Poverty	Climate
380	Property Crime Rate/ 100, 000	.87			
380	Violent Crime Rate/ 100, 000	.86			
380	Total Crime Rate/ 100, 000	.90			
388	Urban - Not Urban	.62			
380	Murder Rate/100,000	.81			
380	Motor Vehicle Theft Rate/100,000	.81			
380	Robbery Rate/100,000	.67			
380	Assault Rate/100,000	.82			
380	Rape Rate/100,000	.79			
380	Burglary Rate/100,000	.86			
380	Arson Rate/100,000	.58			
380	Police Force Rate/100,000	.74			
397	Population		.90		
394	Persons Age 18-20		.96		
394	Persons Age 21-24		.86		
394	Number of Female Headed Households		.79		
394	Percent Below Poverty Level			.81	
394	Percent Unemployed			.76	
394	Average Income			-.76	
397	Average Temperature				.76

The community characteristics, when subjected to principal components analysis, factored into four separate groupings: crime, population, poverty, and climate. We decided to use violent, property, and total crime. Also included in the crime factor was a variable for community urban - non urban setting. We selected community population and the percent of the community population below the poverty level as the best variables from those factors.

Finally, average temperature of the area was included in the regression. It has been shown in the criminal justice literature that temperature does indeed have a statistical correlation with crime rates. The warmer an area is the more likely people are outside doing things and leaving their valuables unattended - targets for theft. Additionally, interactions between disagreeing parties are more likely to turn confrontational in swealtering heat.

The organizational characteristics also were subjected to principal components analysis to identify those variables that tend to vary together. As shown in Table 2, these data separated along four basic lines: size, cost, resource base, and density.

Table 2

Organizational Characteristics

N	Variable	Size	Cost	Resource Base	Density
355	Number Faculty with Ph.D.	.91			
423	Number FT Faculty	.88			
355	Wealth (tricotimized)	.86			
346	Number Library Volumes	.82			
433	Total Enrollment	.77			
433	Total FT & PT Undergrads	.72			
390	Number VPs & Deans	.66			
361	Percent Students In College Housi	-.50			
144	Avg. Assistant Professor Salary		.90		
144	Avg. Associate Professor Salary		.89		
144	Avg. Full Professor Salary		.84		
388	Instate Tuition Charge		.82		
432	Tuition Cost		.82		
354	Room & Board Cost		.80		
355	Percent FT Faculty w/Ph.D.		.63		
145	R & D Expenditures per Student		.53		
	Public/Private				
346	Library Holdings per Student			.87	
104	Endowment per Student			.66	
383	Campus Police Rate			.63	
372	Student/Faculty Ratio			-.55	
378	Number of Campus Acres				.93
372	Campus Police per Acre				.86
371	Students per Campus Acre				.82

Based upon the number of cases and the factor loadings, we selected three size variables for the final model: the number of full-time faculty, total enrollment, and the percent of students in college housing. The relative size of the residence hall operation could serve as a student body characteristic as well as organizational characteristic.

While tuition cost and room and board cost are very similar, they both were used in the final model, especially since tuition is a proxy for public/private, while room and board cost relates to organizational and student affluence. Full, associate, and assistant professor salaries, while having the highest cost factor loadings were only available for 144 colleges, and were eliminated from consideration.

Library holdings per student and the campus police rate (per 100,000) were utilized from the resource base factor because they had more valid cases than endowment per student. The student faculty ratio caused colinearity problems in the final regressions and was excluded from the final analysis.

The number of campus acres and the number of students per campus acre were included in the final regression as density indicators. While campus police per acre was considered a possible

indicator of guardian coverage, it did not fit as well as campus police per capita in subsequent regression equations.

Only six of the student characteristic variables made their way into the final model. Table 3 below shows them. While eight of the variables in the selectivity factor loaded highly, only the percent of freshmen in the top 10% of their high school class was included in the final model. The other variables in the selectivity factor, while loading high, nonetheless were eliminated due to problems with multicolinearity or missing data.

Table 3

Student Characteristics

N	Variable	Selectivit	Fraternity/ Sorority	Financial Aid	Ethnic	Demographic
275	Percent from Top 10% of High Scho	.85				
173	1990 Frosh Attrition	-.85				
271	Percent from Top 25% of High School	.815				
377	Percent Frosh Appl. Accepted	-.815				
336	Barron's Competitiveness	.81				
374	Difficulty of Entrance	.81				
173	1990 Frosh Retention Rate	.79				
171	1990 Graduation Rate	.72				
241	Percent Females Sorority		.93			
242	Percent Males in Fraternity		.92			
246	Percent Fraternity/ Sorority		.90			
372	Percent on Financial Aid			.91		
372	Percent Freshmen w/Fin Aid			.87		
341	Percent Minority Students				.85	
376	Percent Undergrads - Male					.57
424	Percent In-State Students					-.54
378	Percent Foreign Students					
415	Average Age of Undergraduates					
419	Percent Total Students Commuting					
252	Total Transfers Enrolled					
240	Percent Enrolled Frosh w/Need					
433	Total FT Graduate Students					
305	Percent Accepted that Enroll					
372	Student/Faculty Ratio					

The percent of students in fraternities or sororities was utilized rather than just the percentage of males in fraternities or the percentage of females in sororities, even though all three had very high factor loadings.

The financial aid factor contained two indicators of student need: the percentage of freshmen with financial aid, and the percentage of all undergraduates with financial aid. The more encompassing indicator of total undergraduate student body need was utilized in this case.

The percentage of minority students, the percent male, and the percentage of students from in-state each had isolated high loadings, and were kept in the final model to incorporate measures of student diversity.

Results

Trends in Campus crime

As a first step, we examined the longitudinal data set for trends in specific types of crime over time. These crime data are reported **per 100,000 students**. The campus crime rates, therefore, would be even lower if the database included faculty, staff, and visitors in the population. For example, a single sports event on a Saturday night can attract tens of thousands of visitors to the campus, and several CHECCR institutions report that a significant amount of their campus crime is associated with such events.

Chart One compares **violent crime** on-campus to the national trends and shows that **campuses are over 10 times safer than the nation in general**. Violent crime includes murder, assault, rape, and robbery, with assault generally constituting over 75% of the incidents, and robbery another 15%. In 1991, for example, there were more than 750 violent crimes per 100,000 people in the nation, but only about 64 per 100,000 students on campus.

Chart One also reflects a **27% decrease since 1974 in violent crime on-campus** (from 88 to 64 per 100,000), while crime was increasing in the nation by 41% (from 460 to 758 per 100,000). The data for the individual crimes of homicide, assault, rape, and robbery are each relatively consistent with this overall trend -- rising for the nation as a whole, but falling on campus. As the country becomes more dangerous, campuses are becoming safer. These findings are particularly striking when one considers that campuses are full of young people, and these are the most likely to become involved in crime, whether as victims or as offenders.

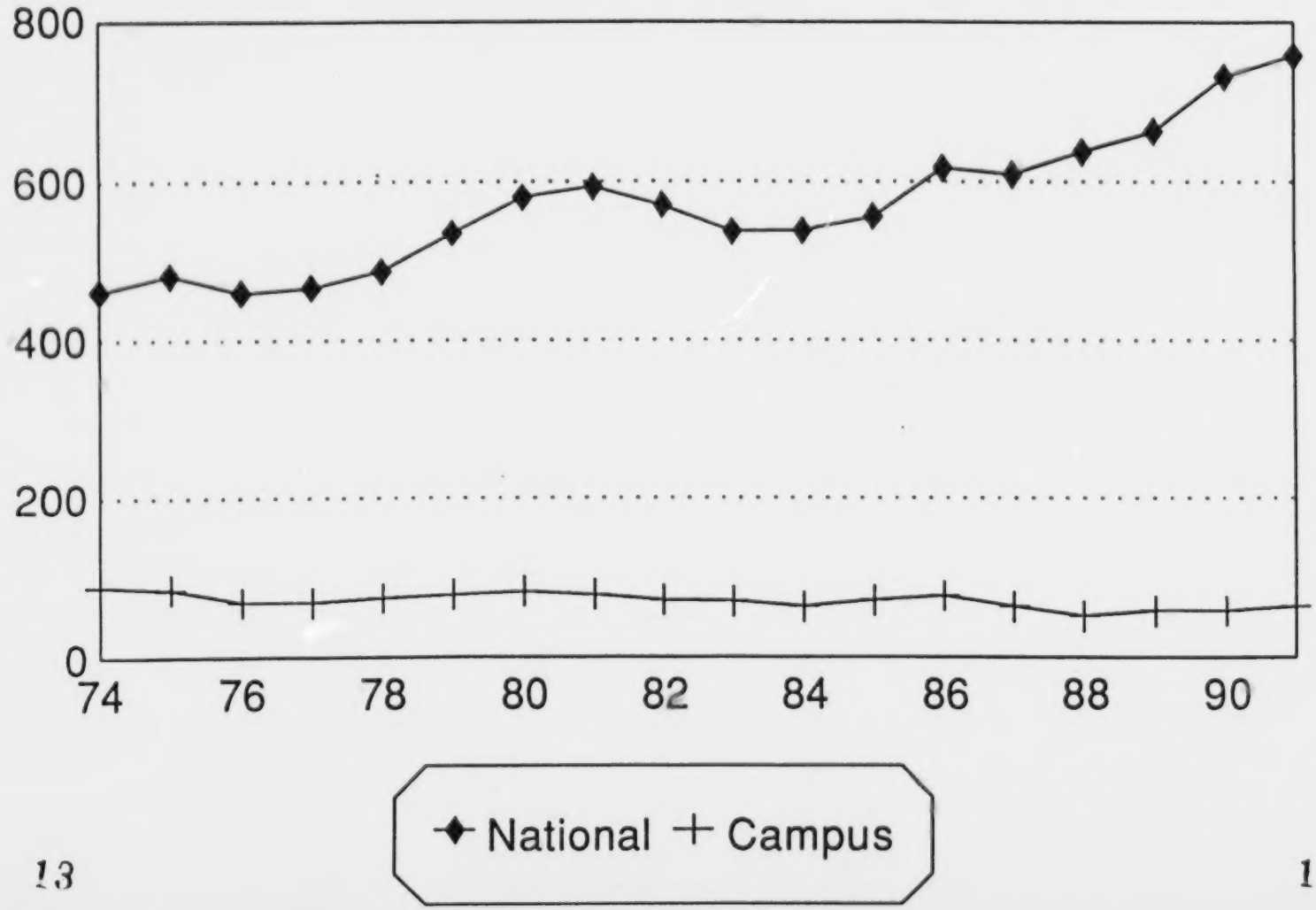
Chart Two compares **property crime** on-campus to the national trends. Property crime includes larceny, burglary, and vehicle theft. Larceny is the largest component of the overall crime rate, and generally accounts for over 80% of campus crime and 55% of crime in the country. Campus property crime in general, and larceny in particular, exhibited similar trends until 1985 when the campus rate began to decrease as the national rate increased. Burglary and vehicle theft rates are substantially higher in the nation than they are on campuses, but burglary rates have been falling while campus vehicle thefts have remained essentially level. It seems logical to attribute the overall improvement in campus crime rates to local crime prevention efforts.

The Correlates of Campus Crime

What are the community, organizational, and student characteristics that are most strongly associated with campus crime? As noted above, we merged data from the 1990 FBI Uniform Crime Report with data from the 1989-90 College Board Survey, as well as data from other sources, in order to examine the relationships between crime rates and campus and student characteristics. Table 4 displays the rates of violent crime, property crime, and total crime by campus type.

CHART ONE

Violent Crime Rates Per 100,000
National and Campus Crime Rates



C H A R T T W O

Propery Crime Rates Per 100,000
National and Campus Crime Rates

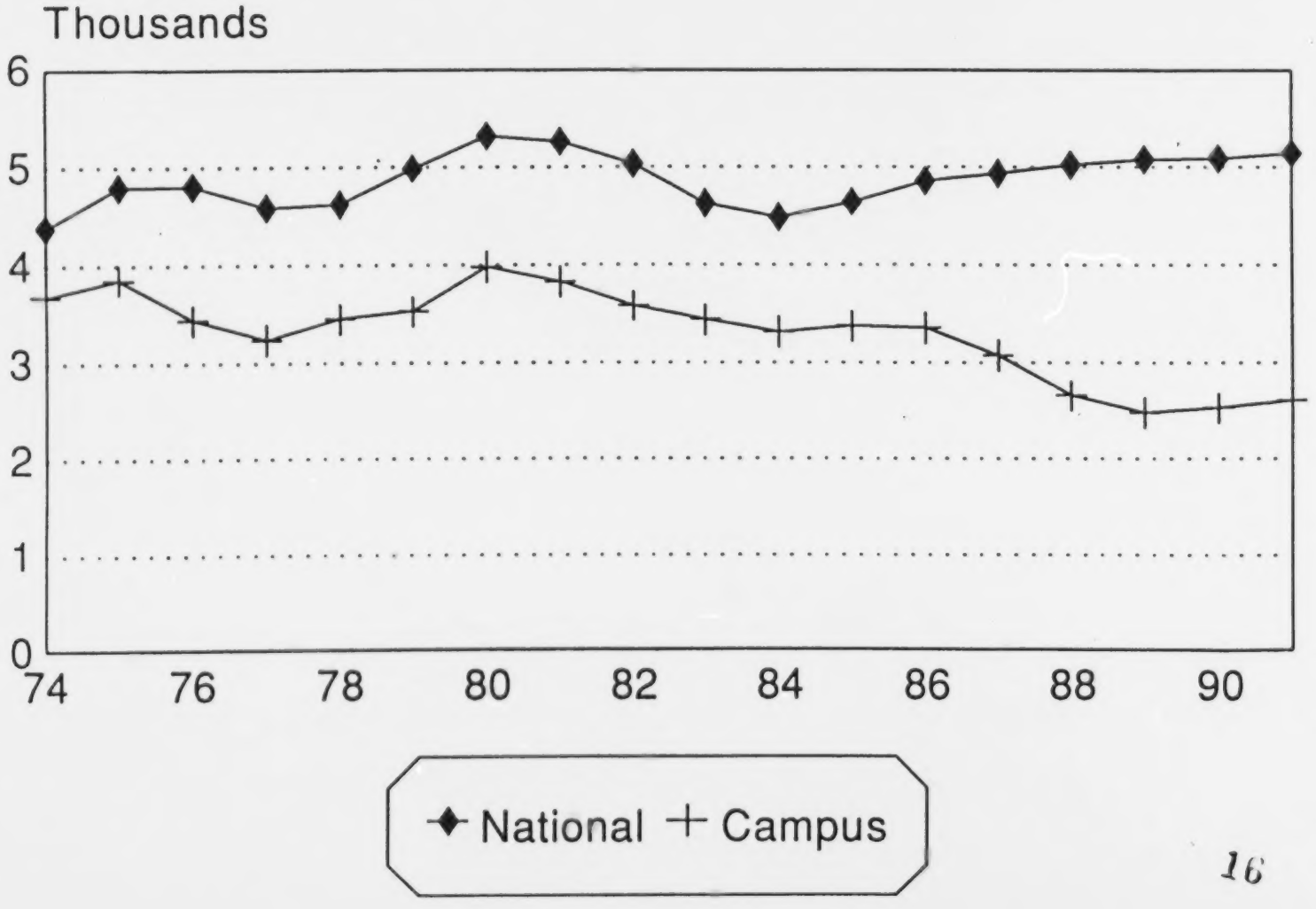


Table 4

Campus Crime Rate (Per 100,000) By Carnegie Type

(N=390)

Carnegie Type	N	Type of Crime: Violent	Property	Total
Two-year	61	36	1507	1543
Liberal-arts II	7	77	2513	2590
Liberal-arts I	3	40	6723	6763
Comprehensive II	15	209	1778	1986
Comprehensive I	163	74	1935	2010
Doctoral II	25	70	2028	2098
Doctoral I	31	67	2662	2729
Research II	23	65	3109	3174
Research I	44	79	4075	4153
Medical and other	18	99	10744	10843

Note: **Violent crime** includes aggravated assault, armed robbery, forcible rape, and murder.
Property crime includes larceny, burglary, and vehicle theft.

The lowest violent and property crime rates are at two-year institutions -- campuses that are mostly non-residential. The highest rates, especially property crime, are at medical schools and health science centers -- institutions that are located generally in inner cities with expensive equipment and many affluent personnel. The highest rate of violent crime (208 per 100,000) is found at Comprehensive II campuses, mostly state colleges in relatively small college towns. The most selective Liberal Arts I schools (although there are only three in the sample) are characterized by relatively low rates of violent crime (40 per 100,000) and relatively high rates of property crime (6723 per 100,000).

For the 390 institutions in the sample, Charts 3 and 4 compare the campus crime rates with the crime rates in the cities and communities in which they are located. Chart 3 shows that students are 6 to 10 times safer from violent crime when they are on campus than when they are in the

CHART THREE

On Campus versus Community Violent Crime Rate (Per 100,000) by Carnegie Type

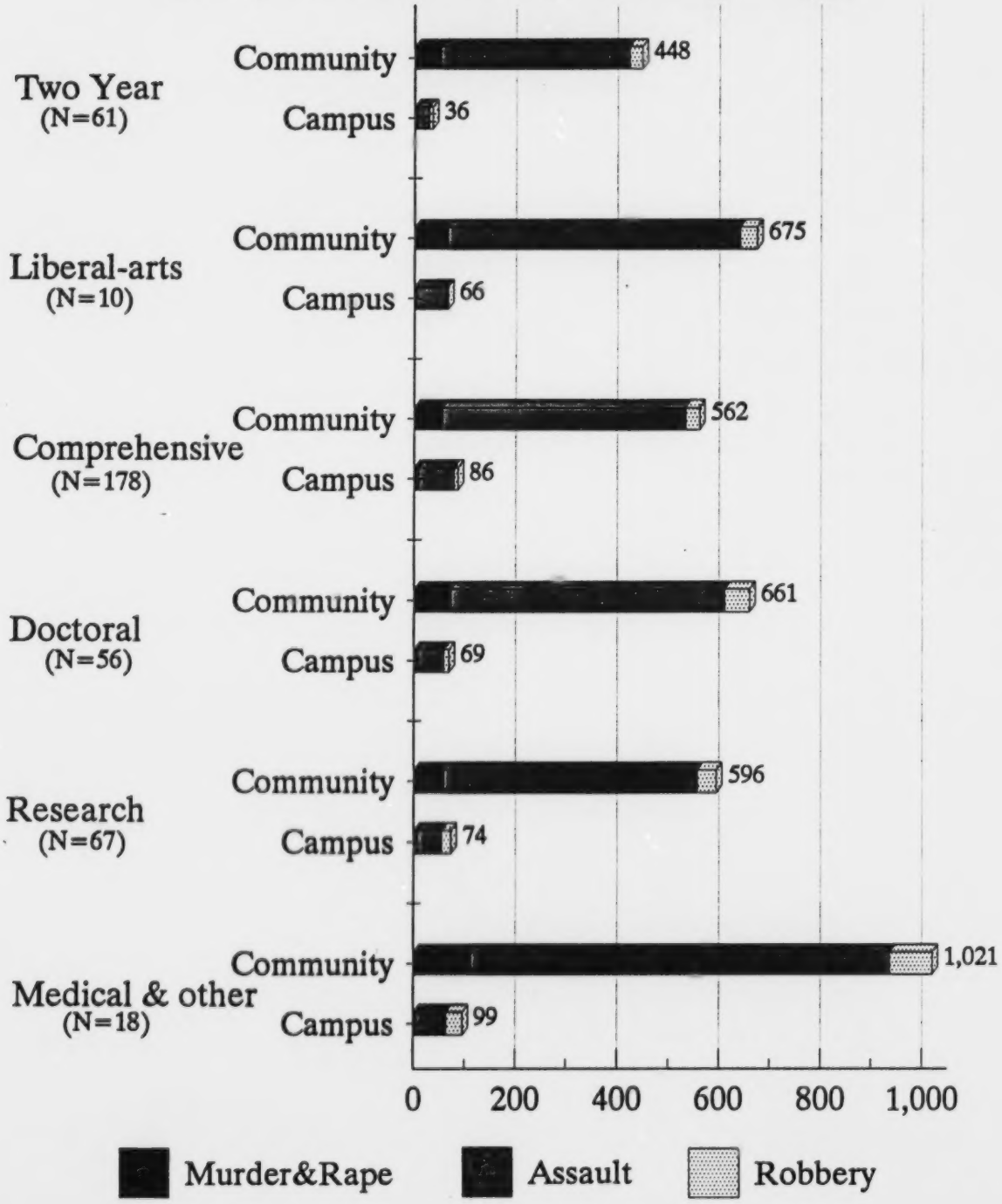
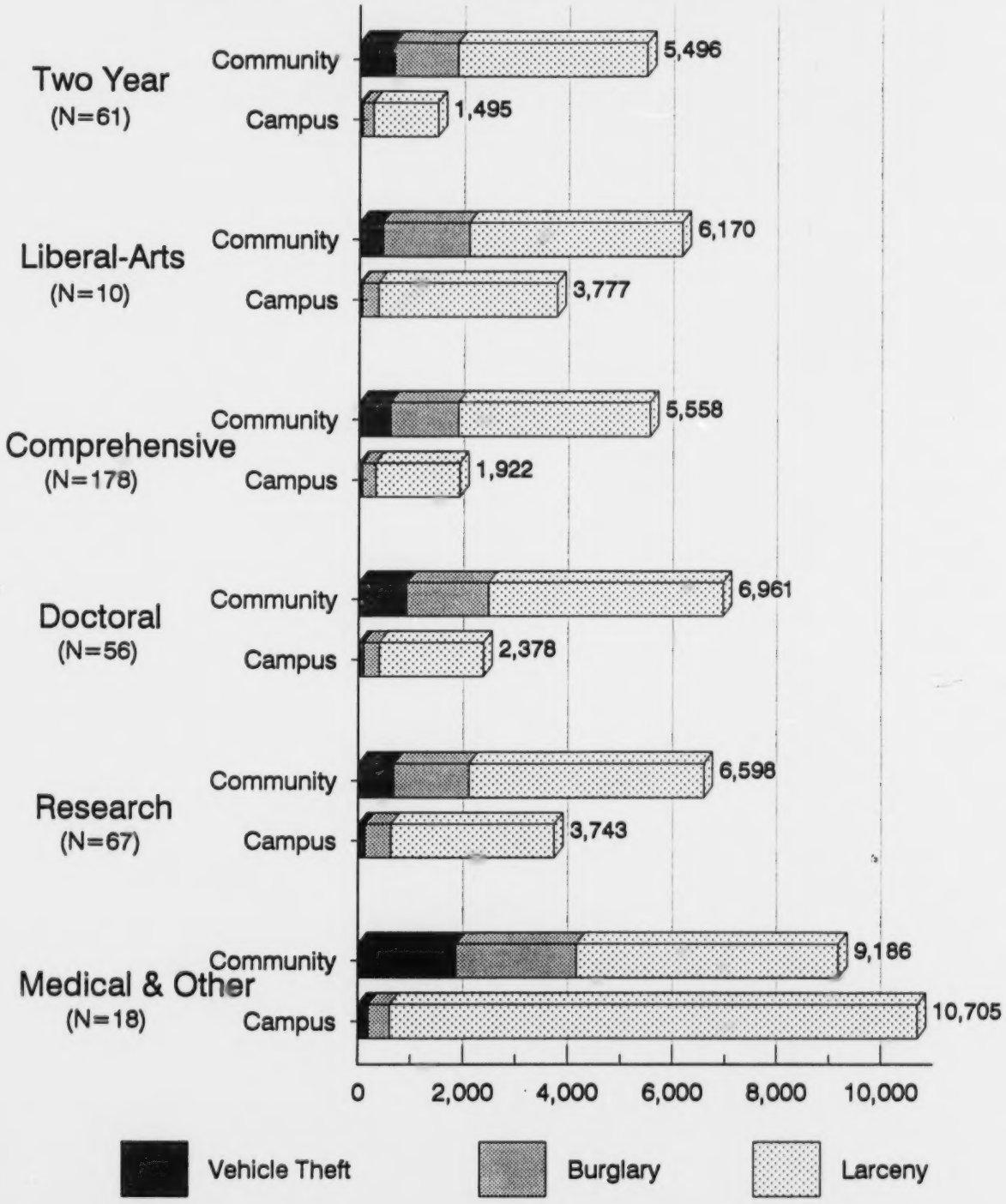


CHART FOUR

On Campus versus Community Property Crime Rate (per 100,000) by Carnegie Type



community. The shading on the bars shows that assault is the most frequent type of violent crime, both on campus and off. Two year institutions on average are housed in communities with the lowest rates of violent crime, and health sciences centers tend to be located in communities with the highest rates.

Chart 4 shows the corresponding comparison for property crime rates. The crime rates in their surrounding communities exceed those on campus for every type of institution, except for medical and health institutions, where the average of 10,744 per 100,000 exceeds even that of the cities in which they are located. [A partial explanation for this finding may be the relatively small number and proportion of medical students at these institutions in comparison to the total number of employees and visitors. This translates a few crimes into a high rate.] Chart 4 also shows that, compared to larceny, the average rates of campus vehicle theft and burglary are small.

Correlates of Violent Crime

As noted above, we used the merged database and hierarchical regression to examine the relationships among crime rates and campus and student characteristics. Based upon prior theory and research, we added the community and structural variables to the regression first. In other words, we made the assumption that campuses are more likely to attract crime than to cause it, especially in view of the patterns in Charts 3 and 4. Likely offenders are generally present in greater numbers off-campus, than on-campus. We also assume that the community variables and the campus organizational characteristics are more enduring than individual students and their aggregate characteristics. Next we added the set of student characteristics into the hierarchical regression to examine their unique contribution to the explained variance. Lastly, we added campus police per capita on the assumption that police staffing is a response to crime and not a cause of it.

Table 5 shows the regression results for violent crime (mostly assault) in the first column, for property crime (mostly larceny) in the second column, and for the total crime rate in the third column.

The first column in Table 5 shows that our community variables by themselves explain an insignificant 3% of the variance in violent crime. Even the level of violent crime off-campus bears little relationship to violent crime on-campus. The campus organizational measures account for another 5% of the variance, also not significant. However, the student variables account for a highly significant 27%. Apparently, violent crime is more strongly associated with the nature of the students, than with the nature of the campus and the community within which it is located.

The fourth step in the hierarchical regression in Table 5 adds the level of campus police on the grounds that this is most probably an institutional response to crime. This single variable, though is not significant and adds only another 6% to the explained variance in violent crime.

The beta weights in the first column show the results of the final regression with all variables in the equation controlling for all others. Beta weights are standardized coefficients -- the larger the beta, the more influential the variable. The results in Table 5 indicate that campuses with the highest rates of violent crime tend to be those with higher than average percentages of minority males and campus police, with lower than average cost and selectivity and fraternity life, and located in areas with lower than average population and poverty. Acting together, these measures explain 41% of the variance.

TABLE 5
RESULTS OF HIERARCHICAL REGRESSION
(Significant Beta Weights Only)

	Type of Campus Crime (Dependent Variable)					
	VIOLENT		PROPERTY		TOTAL	
INDEPENDENT VARIABLES	R^2	Beta	R^2	Beta	R^2	Beta
COMMUNITY CHARACTERISTICS						
Population		-.31**		-.16**		-.18**
Urban/Non-Urban						
Poverty Percent		-.16		.08		
Average Temperature				-.19**		-.17**
Community Violent Crime				.12		.13
Community Property Crime						
Community Police Ratio						
R^2 Increase	.03(ns)		.06(ns)		.05(ns)	
CAMPUS CHARACTERISTICS						
Total Enrollment						
Number of Full-time Faculty						
Tuition Cost						
Room and Board Cost		-.34**				
Number of Campus Acres						
Students Per Campus Acre				-.10		-.10
Library Holdings per Student		.17				
R^2 Increase	.05(ns)		.19**		.19**	
STUDENT CHARACTERISTICS						
Percent from Top 10% of High School		-.22**		.62**		.59**
Percent in-State				.25**		.23**
Percent Male		.19				
Percent in Residence Halls				-.11		
Percent Minority		.57**		-.09		
Percent on Financial Aid				.14*		.12*
Percent Fraternity/Sorority		-.40**				
R^2 Increase	.27**		.39**		.36**	
CAMPUS POLICE		.40**		.81**		.83**
R^2 Increase	.06**		.21**		.23**	
TOTAL R^2	.41**		.85**		.83**	

Note: All beta weights significant at .05 level (ns = non-significant ~~beta weights~~ R^2)
* significant at .01
** significant at .001

Correlates of Property Crime

The second column in Table 5 shows that our community variables alone explain an insignificant 6% of the variance in property crime. Even the level of property crime off-campus bears little statistical relationship to property crime on-campus. On the other hand, the campus organizational characteristics account for an additional 19% of the variance in this crime rate, and the student variables account for another 39%. Property crime is strongly associated with the nature of the campus and its students.

However, we also find evidence of indirect, rather than direct effects between property crime and the nature of the city within which campuses are located. The hierarchical regression results after the third step show, not only that the measures of campus selectivity, cost, and resources are significantly associated with property crime, but also that population and poverty variables are significant. This finding is roughly consistent also with the results of our stepwise regression (not shown here) in which we found that student selectivity, percent in fraternities/sororities, percent female, and the population and poverty levels in host cities interacted to account for almost half the variance in campus property crime. It appears that relatively affluent and selective campuses are more likely to experience property crime, and even more likely still when located in cities with high rates of poverty and violent crime.

The fourth step in the hierarchical regression in Table 5 adds the level of campus police and explains another 21% of the variance in property crime. The raw correlation between campus property crime and campus police per capita is .76, making the rate of police staffing the best single predictor of property crime on campus.

The beta weights in the property crime column of Table 5 show the results of the final regression with all variables in the equation controlling for all others. The most influential variables associated with campus property crime are campus police per capita, rank in high school class, percent on financial aid, and percent in-state. The student density per acre, percent minority and the percent in residence halls are negatively related to property crime.

The presence of interaction effects is suggested by the fact that four community variables are significant in the final equation, even though they failed to prove influential in the first step of the hierarchical regression. Average temperature and being located in a heavily populated area are negatively related to property crime, while violent crime rates and percent below the poverty level is positively related to property crime. When these 10 variables with significant betas interact together, they explain 85% of the variance in campus property crime.

Correlates of Total Crime

The regression on total campus crime produced results similar to the regression for property crime. This was expected because the campus property crime rate in 1990 was 36 times greater than the campus violent crime rate across the entire sample. The last column in Table 5 displays an R-square pattern consistent with the second column: namely, a lack of significance after the first group of community variables are entered, an R-square increase of .19 after the campus measures are entered, and an increase of .36 at the third stage when the student characteristics are entered. As was true with property crime, there is a very high zero-order correlation between the total campus crime rate and campus police per capita ($r = .75$).

Before the campus police variable is entered, the third stage of the regression displays a large number of significant relationships between total crime and a combination of student characteristics (especially student selectivity), and of community traits (especially population and temperature). Having a high percent of students on financial aid and a low density of students per campus acre, also are related to this crime rate. Again we conclude that these variables interact with each other to provide the environment within which campus crime occurs.

Looking across the three columns of Table 5, there are only three variables that display significant beta weights in all three regressions. The area population is consistently negatively related to crime. This finding is not congruent with expectations. High student selectivity in terms of rank in class is associated with low rates of violent crime but with high rates of property and total crime. Other studies suggest that this measure may also be a proxy for student affluence. Finally, campus police presence is the strongest indicator of the presence of reported crime.

We were interested in the possibility of interaction effects, especially in view of the property crime regression results. The community characteristics, in particular, seem to be important only in combination with certain student characteristics. To test this hypothesis decided to conduct a hierarchical regression analysis entering the campus variables first and the community variables afterwards. Table 6 shows the R-square comparisons between the two procedures (community measures first versus student characteristics first). In the two cases, the results are not dramatically different, but the R-square change for the community variables with property crime does rise from .06 to .11 under the two different procedures. This tends to confirm the presence of significant interaction effects.

Table 6

Hierarchical Regression Results for Campus Crime Changes in R^2 Values

Sources of Variance in Crime:	Violent	Property
With Community Variables First:		
Community Variables	.03	.06
Campus Organizational Measures	.05	.19*
Student Characteristics	.27*	.49*
Campus Police	.06	.11*
Total R^2	.41*	.85*
With Student Characteristics First:		
Student Characteristics	.27*	.43*
Campus Organizational Measures	.04	.10
Community Variables	.04	.11*
Campus Police	.06	.21*
Total R^2	.41*	.85*

* = Significant R^2 change.

DISCUSSION AND CONCLUSION

The literature contains few studies on the topic of campus crime, despite its importance. This study utilizes three national databases, as well as data from other sources, to examine, first, the trends in campus crime, and second, the correlates with various community, organizational, and student measures. The study produced several intriguing findings.

First, despite the impressions one might receive from the media, campus crime rates are falling, and they are falling in all categories except vehicle theft which remains level. Moreover, no observers believe the decline in campus crime rates can be attributed to declines in the frequency of reporting criminal acts by campus victims and police. In fact, the current environment encourages the reporting of crime, especially crimes like rape and assault, to a far greater extent than a decade ago.

The data used for this study does not include all categories of crime, such as weapons possession, hate crime, and substance abuse. Beginning in 1993, official reporting requirements will be expanded to include these other categories and future researchers will be able to see if particular types of crime, not reported here, are more common on college campuses.

Second, campuses are much safer than the communities in which they are located. The cities and counties in which colleges are located generally experience twice the rate of property crime and ten times the rate of violent crime than the campuses themselves. In fact, we believe the contrast between campus and community crime rates in reality is even more extreme because our data overestimate campus crime by including only crime per 100,000 students, ignoring the presence of employees and visitors. On many campuses, faculty and staff add another 20% or 30% to the campus full-time population, and large sports events like football and basketball attract many thousands of visitors to events that are notoriously associated with criminal acts, according to many campus police officials. Basing crime rates on the number of students is statistically convenient, but future studies should attempt to calculate rates based upon more realistic campus population estimates.

Third, we find major differences in crime rates at different types of colleges and universities. Compared to students at two-year colleges, those in medical schools and health science centers are 3 times more likely to be victimized by violent crime, and 7 times more likely to experience property crime. However, some of these results derive from the small population at some institutions where a few crimes translate into a high rate per 100,000 students.

The Elements of Crime and Crime Spillover

Criminologists typically consider that three elements must be present in order for crimes to occur. First, there must be an offender who is sufficiently motivated, and perhaps skilled enough, to commit a crime. Second, there must be a target of the crime -- for example, an auto to steal, a person to assault, or a stereo to take. Third, the target of the crime must lack a sufficient guardian to deter the crime. This simple notion can go a long way in explaining crime on campus.

Given this model, campuses that have a high percentage of students living in dormitories should expect high rates of burglary and larceny. This is because students who live on campus bring lots of lightweight durable goods with them (computers, stereos, calculators, and the like). These possessions make great targets for theft and burglary. Furthermore, the wealthier the student, the better the merchandise they will bring to campus. So, campuses with high dormitory populations and wealthy students should have even higher burglary and larceny rates. To make matters worse, students tend to be young, trusting, and naive. They are lousy guardians of their belongings. Not only do young people make good victims, they are also at a prime age to be involved in criminal activity. Alternatively, schools with large numbers of commuters and low dormitory populations should experience more problems with auto theft. Simply put, they have a lot of automobiles sitting around waiting to be stolen.

However, it is not only the characteristics of the campus and the students that make crime possible. Offenders can spill over from the community to the campus. When asked why he robbed banks, Willy Sutton replied: "Because that's where the money is." Offenders typically seek the highest payoff from a crime for the lowest cost. Certain types of offenders from the community may see the campus as being a soft target relative to targets in the community. This should be particularly true of economically motivated crimes that require a modicum of criminal expertise. In other words, crimes like motor vehicle theft, burglary, and robbery on campus may draw offenders from the community. The type of crime perpetrated depends upon the exact combination of campus, student, and community characteristics.

It certainly appears from our data that different types of crime exhibit different dynamics and patterns of causality. Our combinations of community variables, organizational measures, and student characteristics are better at accounting for campus property crime than violent crime. While it is more difficult to identify the variables that are associated with violent crime, our findings regarding campus property crime are relatively consistent with Routine Activities Theory and the Willie Sutton remark. Before the heavily influential campus police variable was entered into the regression, our analysis showed that 64% of campus property crime was associated with selective and affluent campuses located in cities and counties with high rates of poverty.

Most of the property crime rate consists of larceny --an offense that does not usually require professional talent. The other components of armed robbery and auto theft, on the other hand, are most often conducted by professional offenders. College students themselves may carryout larceny, but they are unlikely to work their way through college by means of armed robbery and auto theft. This suggests a separate study aimed at specific types of campus crime because the dynamics are very different.

The evidence for spillover from community to campus in this study is statistically significant, but the evidence is not consistent. While we found evidence of a spillover effect for property crime, we did not for violent crime. We successfully accounted for 85% of the variance in campus property crime, but only 41% of the variance in campus violent crime. What we did find out about violent crime, unfortunately, is consistent with national trends. Violent crime, three-fourths of which is assault, is more prevalent at campuses with above average numbers of minority males and below average cost and quality. This is no doubt a source of concern for all in higher education.

Our study obtained some results that were unexpected. While national crime rates are associated with urbanness, campus crime is not necessarily. For example, campus density in students per acre is negatively associated with property and total crime. Apparently, the more students are spread out, the more hospitable are the circumstances for property crime to occur. Another finding that is inconsistent with national crime patterns is that average temperature is negatively related to property and total crime. Northern locales generally experience less crime, but northern campuses in our study experienced more property crime.

We are not sure how to interpret the high relationship between campus crime and campus police. The high presence of campus police on campuses where crime is occurring may be a sign that administrators are acting responsively, or it may mean that crimes are more often reported and officially recorded on such campuses. The reporting issue is of particular interest to institutional researchers because they are the data managers and questionnaire respondents on most campuses. Studies like ours are heavily dependent upon accurate reporting. To the extent that victims, campuses, and localities under-report crime, it interferes with our ability to understand its causality and to develop appropriate policy responses.

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